# EV Make-Ready Program (MRP) Midpoint Review Technical Conference

Presented by the Joint Utilities of New York

November 18, 2022

**CASE 18-E-0138 - Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs**

**Contents For Discussion Purposes Only – Subject to Change**

JOINT UTILITIES OF NEW YORK

# Agenda

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- Customer cost considerations
- Midpoint average costs
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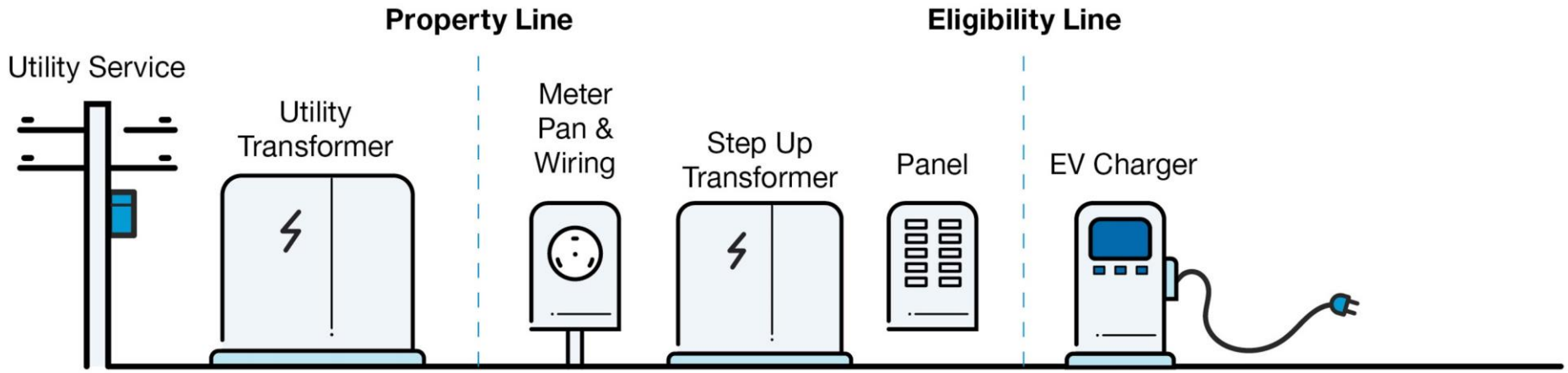
- Upstate customer program needs
- Conclusion
- Q&A

# Make-Ready Program Eligibility

## What's Eligible?




| Eligible for Make-Ready Incentives | | | Not Eligible for Make-Ready Incentives | |
|---|---|---|---|---|
| • Customers may be required to pay for grid upgrades in excess of utility's design requirements | • Panel<br>• Conduit<br>• Trenching<br>• Design<br>• Permitting | • Step Up Transformers<br>• Wiring<br>• Customer Switchgear | • Signs<br>• Bollard<br>• Network<br>• Maintenance | • Charging Station<br>• Network Equipment<br>• Station Installation |
| | **Customer-side MR costs not eligible under MHDV Pilot* | | | |
| **Utility Constructs** | **Customer Constructs** | | | |

***Maps of disadvantaged community (DAC) boundaries can be found on each utility's Make-Ready Program website.**

## How much is covered?

*up to*

**100%**

**L2 at Multi-Unit Dwellings and Public non-proprietary DCFC in a disadvantaged community (DAC)***

*up to*

**90%**

**Public non-proprietary L2 and DCFC**

*up to*

**50%**

**Private access or proprietary L2 and DCFC**

# Total EV charging infrastructure project cost components

**Every EV charging customer today is faced with a variety of potential installation, equipment, and operational costs to consider. . .**

**Front of the meter upgrades (utility-side)**

- Step down transformers
- Line extensions
- New point of entry at the property or service drop
- Meter upgrades
- Panel upgrades

**EVSE & site costs**

- Charger (EVSE)
- Bollards / protective equipment
- Signage
- Lighting
- Paving / painting
- Accessibility / ADA compliance

**Behind the meter upgrades (customer-side)**

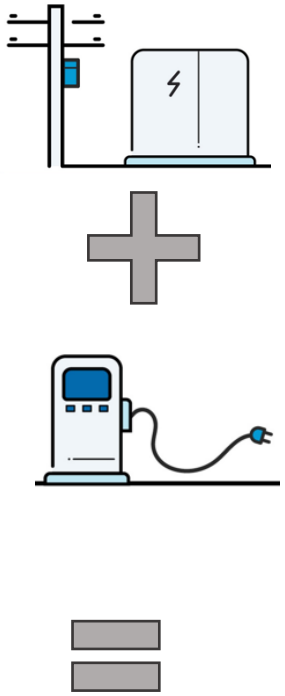
- Step up transformers
- Meter upgrades
- Panel upgrades

**Operating Costs**

- Networking fees
- WiFi/Cell service
- Service agreements
- Equipment replacement
- Site upkeep and routine operations

*Important to note that these needs and costs vary significantly between sites. Furthermore, any financing costs incurred by the customer are not reflected here.*

# Average Cost Comparison



## UPSTATE

| Average Make-Ready Cost | | |
|---|---|---|
| | **L2 ($/plug)** | **DCFC ($/kW, $/plug)** |
| Upstate Actual | $8,190 | $492 ($57,625) |
| Upstate Baseline | $6,000 | $367 |

| Average EVSE Costs* (ineligible for MRP) | |
|---|---|
| **L2 ($/plug)** | **DCFC ($/plug)** |
| $3,687 | $44,423 |

| Average Total Customer Project Cost (Make-Ready + EVSE) | |
|---|---|
| **L2 ($/plug)** | **DCFC ($/plug)** |
| $11,877 | $102,048 |

## DOWNSTATE – CON ED

| Average Make-Ready Cost | | |
|---|---|---|
| | **L2 ($/plug)** | **DCFC ($/kW, $/plug)** |
| Con Ed Actual | $15,467 | $657 ($69,261) |
| Downstate Baseline | $11,257 | $667 |

| Average EVSE Costs* (ineligible for MRP) | |
|---|---|
| **L2 ($/plug)** | **DCFC ($/plug)** |
| $2,422 | $31,844 |

| Average Total Customer Project Cost (Make-Ready + EVSE) | |
|---|---|
| **L2 ($/plug)** | **DCFC ($/plug)** |
| $17,889 | $101,105 |

**Average EVSE costs do not include other customer site costs (e.g., bollards, networking costs), which are not tracked by the utilities. Refer to slide 11 for typical cost ranges.*

# Downstate: demand is tempered by rising customer costs

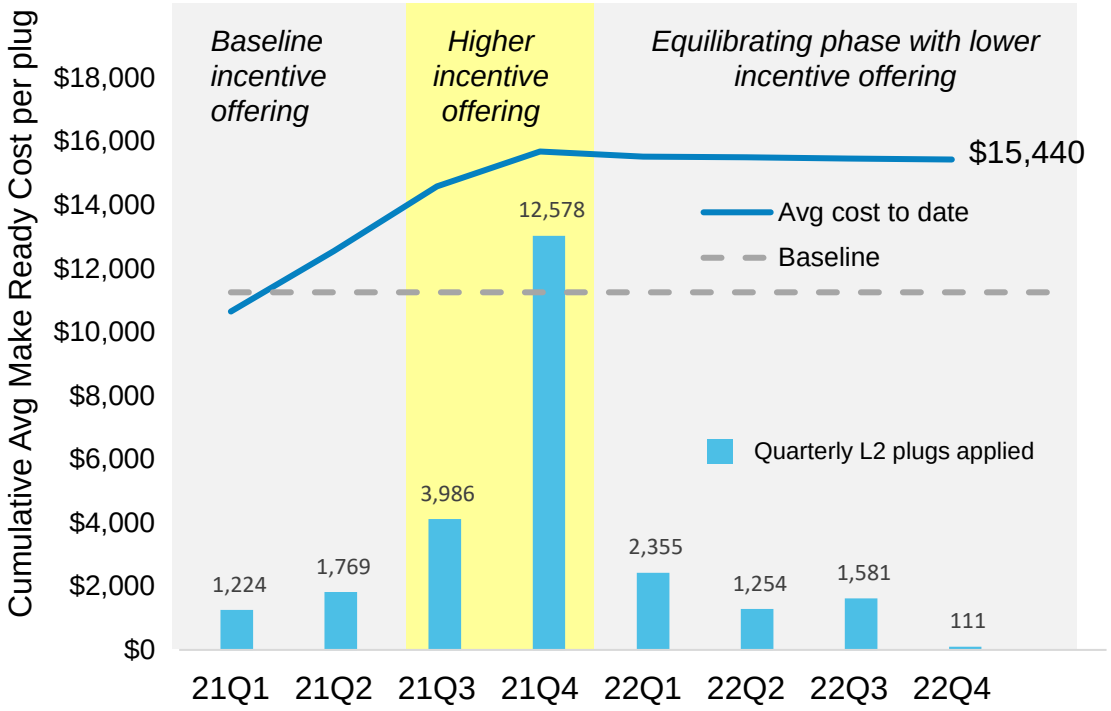
- Nascent EV charging market is reliant on incentives
  - Downstate demand for EV charging has built momentum
  - While there is a robust queue of applications for L2 plugs, applications and project progress have ebbed and flowed with incentive levels
- Cost increases have outpaced incentive levels, with average L2 make-ready costs exceeding the Order baseline by over 35%

→ Market requires incentive levels that reflect true make-ready costs to continue momentum and avoid backsliding

# The Level 2 market relies heavily on sufficient incentive levels

An incentive baseline that reflect real costs and market need is critical to economic viability and sustainability of EV charging market

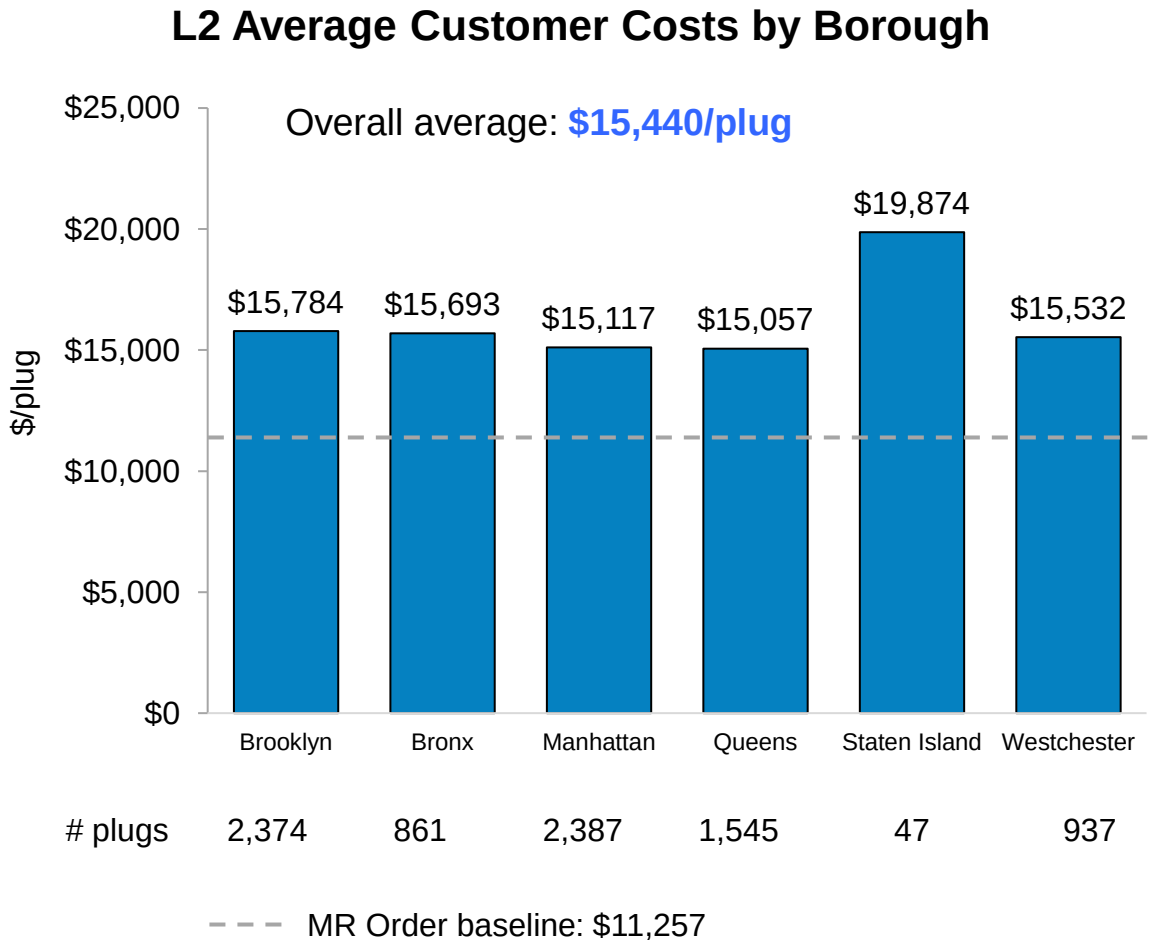
## Average Level 2 Customer Costs (not Incentives)




- The **L2 market is highly sensitive to incentive levels**
  - L2 applications were modest in the early program *when incentive levels were held at the baseline*
  - Increase of incentive cap jump-started the market
  - When higher incentive tier (up to 100%) saturated in November 2021 nearly one-third of projects not receiving the higher level canceled, and applications at multi-unit dwellings (MUDs) fell dramatically[1]
  - After Con Ed lowered max incentives in early 2022, applications rates dropped by more than two-thirds
- Average cost of canceled projects are 12% higher than average cost of completed/committed projects, indicating high costs may be an inhibiting factor

1. MUDs accounted for ~75% of all applications in 2021 and only ~35% in 2022

# Level 2 costs consistently exceed the baseline from the Make Ready Order



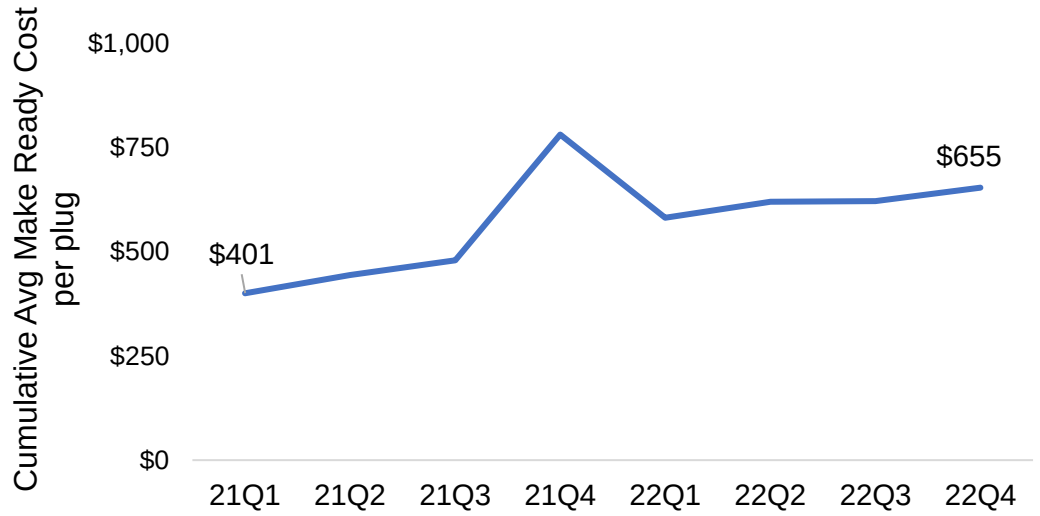

**Average L2 costs are consistently above baseline across all boroughs**

- Costs have been driven up by inflation which is high overall and for specific items affecting EVSE installs
- Average cost is in line with those in similar jurisdictions
  - PG&E averages $17,500 per plug

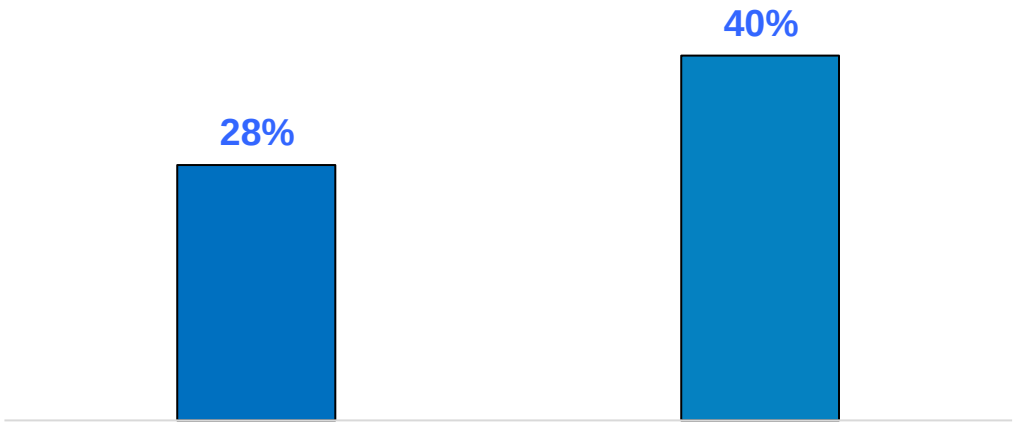
# Expect DCFC costs to continue rising as need for utility-side work increases

- Customer-side make-ready costs have risen by over 60% as the program has received applications for a full range of projects over the last 2 years
- Project costs are expected to increase utility upgrades become more common, driven by increasing site sizes and service-adequate sites becoming harder to find

## Average DCFC Customer Costs (not Incentives)




## Percentage of DCFC Projects Requiring Utility-side Work




| | Program Year 1 (July 2020 – July 2021) | Program Year 2 (July 2021 – Present) |
|---|---|---|
| Avg Total kW per site | 375 | 465 |



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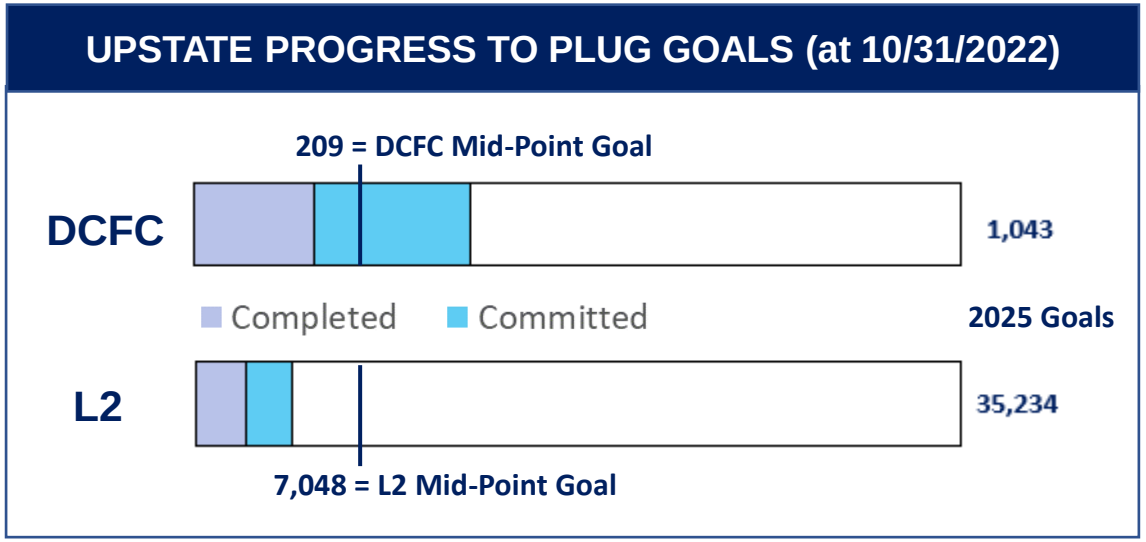
# Upstate: Customers require greater cost coverage to stimulate adoption

## Challenges

- The upstate EV market is still nascent and demand for charging is low
- Additional incentives are needed to support broad and diverse market growth
- While customers are showing interest in EV charging, statewide EVSE deployment is behind target
- Site host economics continue to be a barrier to deployment
- Existing MRP incentives only cover a portion of total customer costs and are not sufficient to stimulate program participation at targeted levels
- EVSE, networking, and other equipment costs continue to rise and are not covered under MRP



# Typical L2 site with 4 plugs (representative upstate example)

***Existing make-ready incentives only cover a portion of total customer costs. As EVSE, networking fees, and other costs continue to rise, make-ready incentives are not enough to justify the business case for many customers.***

| | Customer-Side Make-Ready | Customer Equipment and Site Costs | | | | Total Cost | |
|---|---|---|---|---|---|---|---|
| | Customer transformer, trenching, panel & EVSE pre-wiring, etc. | EVSE | EVSE Install | Site costs (striping, signage, bollards, etc.) | Networking Fees and Maintenance (5 years) | **Total Project Cost to Customer** | **Percent of Total Costs Incentivized** |
| *Incentive eligible* | *Yes* | *No* | *No* | *No* | *No* | | |
| Total Cost, no incentive | $24,000 | $16,000 | $8,000 | $5,000 | $4,000+ | **$57,000** | **0%** |
| With up to 50% MR Incentive | $12,000 | $16,000 | $8,000 | $5,000 | $4,000+ | **$45,000** | **21%** |
| With up to 90% MR Incentive | $2,400 | $16,000 | $8,000 | $5,000 | $4,000+ | **$35,400** | **38%** |
| With up to 100% MR Incentive | $0 | $16,000 | $8,000 | $5,000 | $4,000+ | **$33,000** | **42%** |

Notes:

- Any financing costs incurred by the customer are not reflected in this example.
- The table is not inclusive of customer CIAC.

# Site host economics continue to be a barrier to deployment

***Total project cost remains a barrier for upstate customers, according to Make-Ready Contractors:***

*"We have had some proposals that just don't get signed due to the costs that would be incurred by the customer and it's a very hard sell for something that they don't feel is a necessity or even a market that is there yet."*

**"Charging stations are not a necessity for [small businesses] at that cost. It's a luxury."**

**"When NYSERDA had funding for the stations coupled with the Make Ready incentive, it was an easier sell, as there was little to no out-of-pocket cost and people saw the value in getting their site EV ready and ROI was instant."**

"Customers have to pay for stations that have a lengthy return on investment (ROI) and network fees associated with installs. They would need hundreds of charges a month to possibly break even and they think we are just not at that point yet in the marketplace with the amount EVs on the road."

National Grid's average monthly application for L2 plugs intake dropped by **45 percent** after Charge Ready NY incentives were exhausted in September 2021

# Conclusion

## The JU has observed…

- While pipeline of interested customers is strong, statewide EVSE deployment is behind target
- Existing incentives are not stimulating program participation at expected levels
- Make Ready costs are higher than anticipated in the Order in some cases
- Lack of consistently available stackable incentives softened the market

## Which means…

- Incentives are not going far enough to support customers' total project costs
- The current pace of deployment will misalign utility support with state goals

## New York State has an opportunity during the Midpoint Review to…

- Align budget baselines to actual average costs, where needed
- Provide additional support to accelerate upstate demand and EV adoption
- Allow utility incentives to cover EVSE and other customer site costs
- Consider extending program timeframe to hit existing targets and additional goals past 2025

# Q&A